

MSI

MEGA PC





N1996

FCC-B Radio Frequency Interference Statement

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

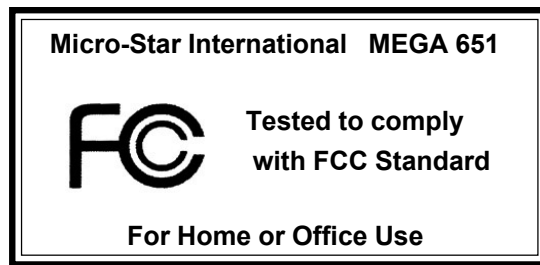
Notice 1

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Notice 2

Shielded interface cables and AC. power cord, if any, must be used in order to comply with the emission limits.

VOIR LA NOTICE D'INSTALLATION AVANT DE RACCORDER AU RESEAU.



Lithium Battery Statement

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Macrovision® Statement

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing users only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.



Safety Instructions

1. Always read the safety instructions carefully.
2. Keep this User's Manual for future reference.
3. Keep this equipment away from humidity.
4. Lay this equipment on a reliable flat surface before setting it up.
5. The openings on the enclosure are for air convection hence protects the equipment from overheating. **DO NOT COVER THE OPENINGS.**
6. Make sure the voltage of the power source and adjust properly 115/230V before connecting the equipment to the power inlet.
7. Place the power cord such a way that people can not step on it. Do not place anything over the power cord.
8. Always Unplug the Power Cord before inserting any add-on card or module.
9. All cautions and warnings on the equipment should be noted.
10. Never pour any liquid into the opening that could damage or cause electrical shock.
11. If any of the following situations arises, get the equipment checked by a service personnel:
 - The power cord or plug is damaged.
 - Liquid has penetrated into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment has not work well or you can not get it work according to User's Manual.
 - The equipment has dropped and damaged.
 - The equipment has obvious sign of breakage.
12. **DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT UNCONDITIONED, STORAGE TEMPERATURE ABOVE 60°C (140°F), IT MAY DAMAGE THE EQUIPMENT.**



CAUTION: Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer.

Copyright Notice

The material in this document is the intellectual property of **MICRO-STAR INTERNATIONAL**. We take every care in the preparation of this document, but no guarantee is given as to the correctness of its contents. Our products are under continual improvement and we reserve the right to make changes without notice.

Trademarks

All trademarks are the properties of their respective owners.

Intel® and Pentium® are registered trademarks of Intel Corporation.

PS/2 and OS®/2 are registered trademarks of International Business Machines Corporation.

Windows® 95/98/2000/NT/XP are registered trademarks of Microsoft Corporation.

Netware® is a registered trademark of Novell, Inc.

Award® is a registered trademark of Phoenix Technologies Ltd.

AMI® is a registered trademark of American Megatrends Inc.

Revision History

Revision	Revision History	Date
V1.0	First release	April 2003
V1.1	Add "Media Center" and "Appendix" Make update on p. 1-7 & 3-3 Replace v1.0	June 2003
v1.2	Special Edition for SI	July 2003
v1.3	Remove "Media Center" Replace v1.1	July 2003
v1.4	Update Chapter 3 Replace v1.3	Sep. 2003

CONTENTS

Introduction

Chapter 1. Getting Started.....	1-1
All-in-One Feature Set.....	1-2
Front Panel.....	1-3
Back Panel.....	1-3
System Specification.....	1-4
Performance PC	1-6
Hi-Fi Audio.....	1-8
Home Theater.....	1-10
Chapter 2. Introducing Mainboard.....	2-1
Mainboard Layout.....	2-2
CPU/Memory.....	2-3
Introduction to DDR SDRAM.....	2-3
Power Supply.....	2-4
Front Panel.....	2-5
IEEE 1394 Port: J1394-2.....	2-5
IEEE 1394 Port: J1394-1.....	2-6
USB Ports.....	2-6
Mic-in/Head-Phone.....	2-7
OPTICAL SPDIF-in.....	2-7
Back Panel.....	2-8
Serial Port.....	2-8
VGA Port.....	2-9
Mouse/Keyboard Connectors.....	2-9
RJ45 LAN Jack.....	2-10
USB Ports.....	2-10
OPTICAL SPDIF-out.....	2-10
Parallel Port.....	2-11
Audio Port.....	2-12
Connectors.....	2-13

IDE Connectors: CN22 & CN23.....	2-13
FDD Connector: CN10.....	2-13
CD-in Connector: CN16.....	2-14
TV-Tuner Card Connector: CN13.....	2-14
CPU Fan Connector: CN15.....	2-14
Front Panel Power Connector: CN4.....	2-15
USB Card Reader Connector: CN6.....	2-15
LCM Connector: CN18.....	2-16
Modem Module Connector: CN21.....	2-16
Jumper.....	2-17
Clear CMOS Jumper: J2.....	2-17
Slots.....	2-18
PCI Slot.....	2-18
AGP Slot.....	2-18
Chapter 3. Using Audio Function.....	3-1
Introduction.....	3-2
Control Panel.....	3-3
Remote Controller.....	3-4
AC Power on.....	3-5
Playing CD/MP3 in Hi-Fi Mode.....	3-6
Playing FM/AM in Hi-Fi Mode.....	3-10
Using Audio Function in PC Mode.....	3-12
Radio Mode.....	3-12
CD\MP Mode.....	3-13
Chapter 4: Setting BIOS Function.....	4-1
Entering Setup.....	4-2
Control Keys.....	4-2
Getting Help.....	4-3
Main Menu.....	4-3
Sub-Menu.....	4-3
General Help<F1>.....	4-3
The Main Menu.....	4-4

Standard CMOS Features.....	4-6
Advanced BIOS Features.....	4-8
Advanced Chipset Features.....	4-11
Integrated Peripherals.....	4-13
Power Management Setup.....	4-19
PNP/PCI Configurations.....	4-23
PC Health Status.....	4-25
Frequency/Voltage Control.....	4-26
Appendix. Using Mega Radio.....	A-1
Listening to Radio.....	A-2
Setting Memory Station.....	A-6
Recording Music.....	A-7



Introducing Your “Digital Media Platform”

Thank you for your purchasing of MEGA 651, the Best of Computing & Home Entertainment. Based on the design idea of consumer product, the MEGA 651 is not just a PC anymore. The "All-in-One" feature positions MEGA 651 as a Digital Media Platform.

From the recent years, the ownership and usage of desktop and notebook PCs across W.W. households has turned computers into a commodity item. While Microsoft strongly promotes the "Media Center" platform concept "Windows XP Media Center Edition" on HP "Free Style", Intel is also exploring their "Digital Home" concept for the "Home-use" PC.

To meet the new concept of Home PC, the MEGA 651 has been positioned as a Digital Media Platform to perform TV-recording (optional), home theater (DVD+5.1 channels), digital audio playback (MP3, Audio CD), photo and video stream data browsing. Meanwhile, it can also support high game performance (AGP 4x slot). On the other hand, the remote controller allows you to use it like an advanced Hi-Fi stereo in playing CD/MP3 and listening to radio.



An innovative feature to implement the Hi-Fi stereo into home PC with a fancy equalizer LCM and control panel on the front bezel

MAXIMIZE YOUR CONNECTION TO THE DIGITAL PLANET



- Hi-Fi Stereo: Audio CD+MP3 Player+AM/FM Tuner
- Home Theater: DVD + 5.1 Channel + TV Tuner (option)
- Media Center: Card Reader + 1394 + SPDIF I/O +PVR
- Completed PC: Office + Game Machine

A New Digital Media Form Factor from MSI That Allows You to

- Control Live Television
- Enjoy Home Theater (DVD + 5.1 Channel)
- Listen to Digital Music (MP3, Audio CD)
- Burn Music, Photos and Video
- View Your Favorite Photos
- Incredible Gaming Performance
- And more.....

For Home, For Work & For Fun

1

Getting Started

1.1 All-in-One Feature Set

1.2 System Specification

1.3 Performance PC

1.4 Hi-Fi Audio

1.5 Home Theater

Chapter 1

1.1 ALL-IN-ONE FEATURE SET

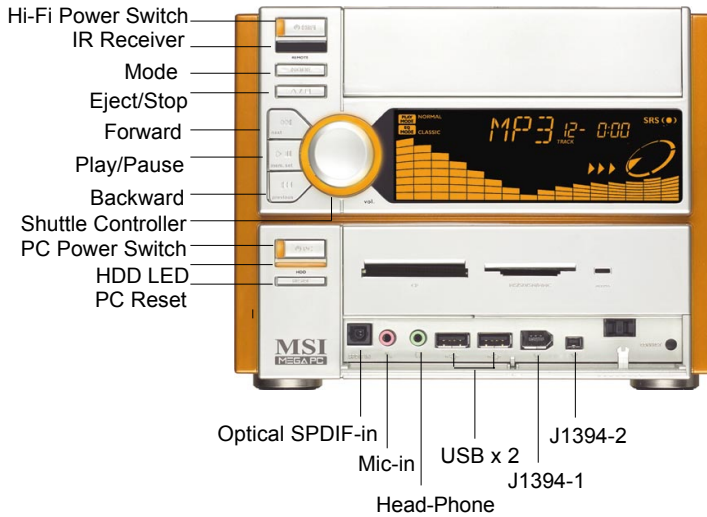
The MEGA651 implements all the Hi-Fi Stereo into Home-PC with a fancy equalizer LCM and control panel in the front bezel. When PC is power off, you can use it just like a Hi-Fi Stereo with a **remote controller**. When PC is power on, you can use it for Home Theater and Media Center PC. The all-in-one feature provides you with multiple functions in a small form factor. It can be set anywhere you want, such as bedroom or living room, while it's easily be moved to anywhere whenever you need.

See the following for the feature:

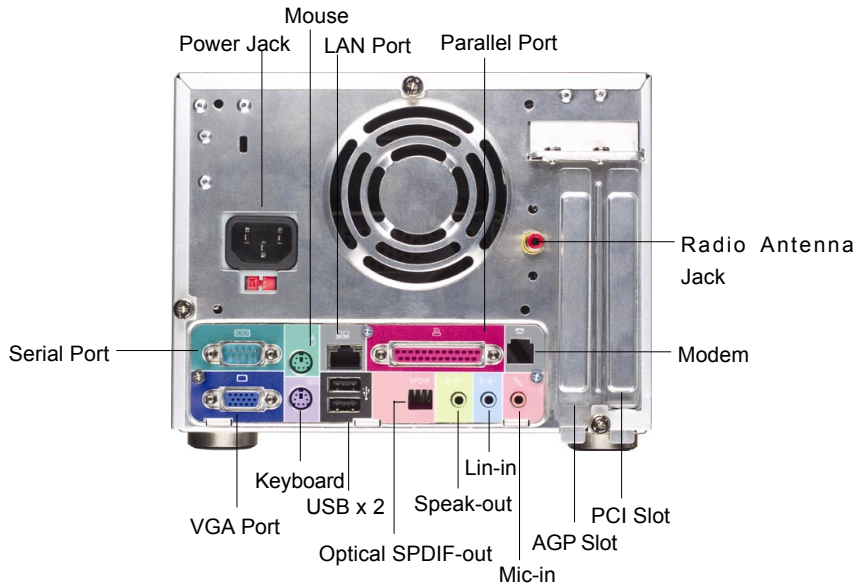


- Hi-Fi Stereo: Audio CD+ MP3 Player+ AM/FM Tuner (power off)
- Home Theater: DVD+ 5.1 Channel
- Media Center: A/V Browsing/Radio Turning (Card Reader+ 1394+ SPDIF I/O+CD-RW) + PVR (TV Tuner)
- Completed PC: Office+ Game Machine

Front Panel



Back Panel



Chapter 1

1.2 SYSTEM SPECIFICATION

● M/B

- MS-6760 (Proprietary F/F), 185 x 290 mm (4 layer)

● CPU:

- Support Socket 478 for Pentium® 4, 2.8 GHz

● Chipset:

- SiS 651 + SiS 962

● Memory:

- DDR 333 x 2, support memory up to 2.0GB

● On-Board Audio:

- AC'97 Codec integrated in ALC 650, support 5.1 channel , SPDIF In/Out.

● On-Board VGA:

- Integrated (AGP 4X)

** On-Board VGA memory: None

● On-Board Communication

- LAN: integrated in Realtek (10/100Mb)
- Modem: 56K MDC module

● On-Board USB

- Front x 2; Rear x 2; On-Board x 2 for Card Reader & RF K/B, M/S (MFG Option)

● On-Board IEEE 1394:

- RTL8801B PHY (2 ports), Front x 2 (4 pin, 6 pin)

● Expansion Slots:

- PCI 2.2 x 1, AGP (4X) x1

● Power Off Function:

- Playback Audio CD, MP3, AM/FM Radio Tuner (with Remote Controller)

● TV Tuner Function

- MS-8606 (Option PCI with remote controller)

● Power Supply:

- 200W (PFC 5V/12V SB) Full Range

● Chassis:

- 202(W) x 320(D) x 151(H) mm (9.76 Liters)



On-Board Headers & Connectors

- Rear Panel: Parallel Port x 1, Serial Port x 1, VGA x 1, PS/2 x 2, Mic in/Line in/Line out x 1, USB x 2, LAN (RJ45) x 1, SPDIF/O x 1, Modem (RJ11) x 1
- Front Panel: Mic in/Headphone x 1, USB x 2, SPDIF/I x 1, 1394 x 1 (4-pin), 1394 x 1(6-pin)

Q BIOS

- 2MB Flash

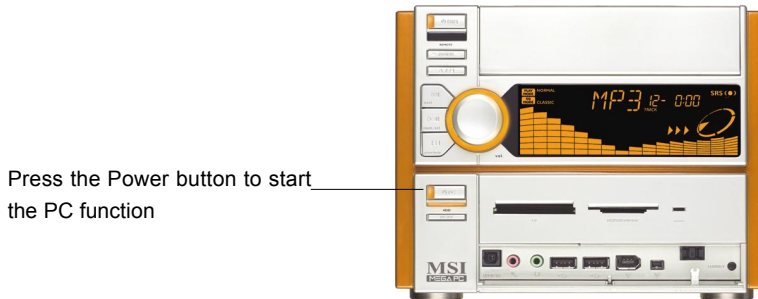
 Others

- Microsoft® PC 2001
- LAN Wake Up Function
- Suspend to RAM/Disk function
- Top Tech III (Thermal Overheat Protection Technology)
- PC Alert System Hardware Monitor
- On-Board BlueBird Module for Power-Off features
- On-Board Equalizer (LCM)



1.3 PERFORMANCE PC

When PC is power on, the MEGA651 is your performance PC. Power on means "If the power button of PC is pressed, the Hi-Fi stereo has no function even you press the Hi-Fi button."



Features

CPU support: Intel P4

PCI/AGP Expansion

Front I/O

- Mic-in/Head-Phone
- USB x 2
- 1394 x 2 (6-pin & 4-pin)
- Optical SPDIF-in
- 6-in-1 Card Reader

Rear I/O

- COM/VGA/Parallel/PS2 x 2
- LAN (RJ45)
- USB x 2
- Optical SPDIF-out
- Speaker-out/Line-in/Mic-in (5.1channel)
- Modem
- Radio Antenna

See Chapter 2 for more information of mainboard, Front and Rear I/O.

🎯 Target Operating System

```
-- Microsoft Windows XP Home Edition
```

Security

-- The security features protect the data of machine from unveiled publicity and unauthorized access through BIOS control.

🔑 Password

-- The MEGA651 uses two levels of BIOS access (User Password & Supervisor Password) to protect the computer system.

Storage Subsystem

- 1) Floppy (Standard Floppy & USB Floppy)
- 2) Hard Disk
- 3) CD-ROM (OPTIONAL)
- 4) DVD-ROM (OPTIONAL)
- 5) CD-RW (OPTIONAL)
- 6) DVD/CD-RW Combo (OPTIONAL)



In pure barebone Hi-Fi mode with NO CPU, Memory, Hard Disk installed, if you push the PC power button, the system will dead hang up. The Hi-Fi mode will be malfunction. It's impossible to recover the system by pressing power button for 4 seconds. The only way is to unplug power cord and reset the system.

1.4 HI-FI AUDIO

Option 1

Option 2

A photograph of a grey MSI remote control. The remote features a standard numeric keypad (0-9), a power button at the top right, and various function buttons like CH-RTN, F, and MUTE. A red laser pointer beam points directly at the MUTE button, which is located below the central navigation pad. The MSI logo is visible at the bottom of the device.

LCM Display, Clock, AM/FM Radio Tuner, Audio CD Play,
MP3 CD Play, SRS

See Chapter 3 for more information of using audio function.



SRS

MEGA651 is equipped with SRS audio enforcement technology. SRS (Sound Retrieval System) was the first generation of 3D sound, dramatically improving the quality of standard stereo. SRS is based on the human hearing system and was designed to retrieve the natural spatial cues and ambient information that is present in audio but masked by traditional recording and playback methods.



Whether the signal is mono or stereo, SRS expands the audio material to create a realistic three-dimensional sound image. SRS has no sweet-spot and fills the room with a sound experience much closer to that of a live performance.

SRS is a trademark of SRS Labs, Inc. SRS technology is incorporated under license from SRS Labs, Inc.

Chapter 1

1.5 HOME THEATER

Except the general PC function, the MEGA651 has the extra Home Theater function when PC button is pressed on.

When PC button is pressed on, you can use the equipped optical drive to play DVD. The equipped 5.1 channel audio effect gives you a wonderful feeling of home theater while playing DVD.

Plus, the **OPTIONAL** MS-8606 TV-Tuner card allows you to watch TV. The top part of remote controller is designed specially for the TV-Tuner function. For more information on MS-8606 TV Tuner card, please refer to the manual packed in MS-8606. After inserting the TV Tuner card, remember to install the driver packed in CD to using the function.



2

Introducing Mainboard

2.1 Mainboard Layout

2.2 CPU/Memory

2.3 Power Supply

2.4 Front Panel

2.5 Back Panel

2.6 Connectors

2.7 Jumper

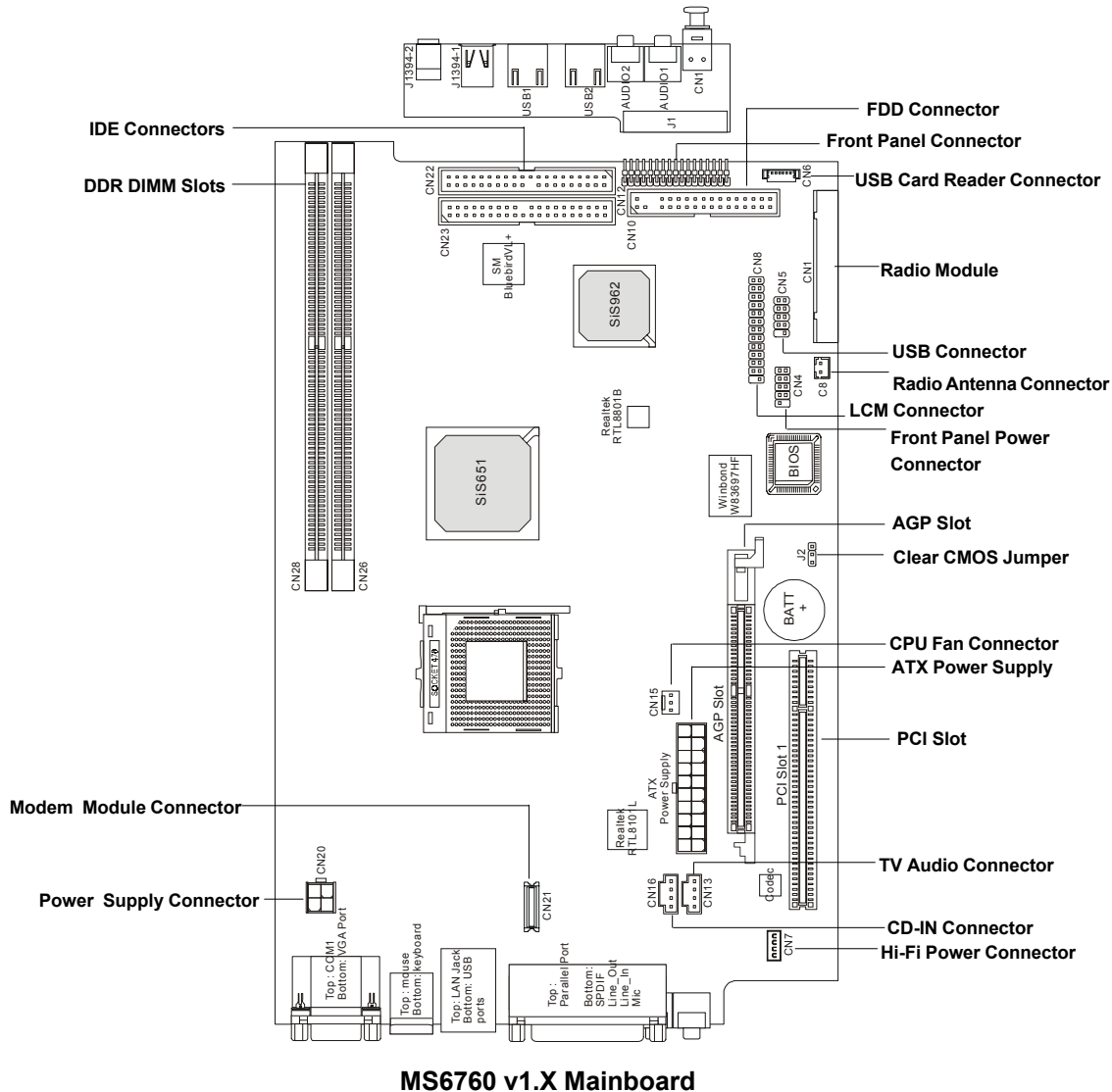
2.8 Slots

Chapter 2

2.1 MAINBOARD LAYOUT

The MEGA651 is equipped with MS6760 proprietary mainboard.

See the following for the mainboard layout:



2.2 CPU/MEMORY

The MEGA651 supports **Intel® Pentium® 4** processors in the 478-pin package. The mainboard uses a CPU socket called PGA478 for easy CPU installation. When you are installing the CPU, make sure the CPU has a heat sink and a cooling fan attached on the top to prevent overheating.



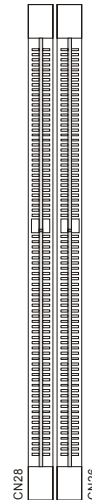
Overheating

Overheating will seriously damage the CPU and system, always make sure the cooling fan can work properly to protect the CPU from overheating.

The mainboard provides 2 slots for 184-pin DDR SDRAM DIMM (Double In-Line Memory Module) modules and supports the memory size up to 2GB. You can install PC2700/DDR333 or PC2100/DDR266 modules into the DDR DIMM slots (CN28/26).

Introduction to DDR SDRAM

DDR (Double Data Rate) SDRAM is similar to conventional SDRAM, but doubles the rate by transferring data twice per cycle. It uses 2.5 volts as opposed to 3.3 volts used in SDR SDRAM, and requires 184-pin DIMM modules rather than 168-pin DIMM modules used by SDR SDRAM. High memory bandwidth makes DDR an ideal solution for high performance PC, workstations and servers.



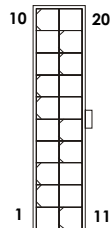
Chapter 2

2.3 POWER SUPPLY

The system is equipped with a 200W(PFC) ATX power supply. The power cord of power supply has been connected to the connectors on the mainboard when shipped out. You can find two connectors (20-Pin & CN 20) on the mainboard.

ATX Power Supply Pin Definition

PIN	SINGAL	PIN	SIGNAL
1	3.3V	11	3.3V
2	3.3V	12	-12V
3	GND	13	GND
4	5V	14	PS_ON
5	GND	15	GND
6	5V	16	GND
7	GND	17	GND
8	PW_OK	18	
9	5V_SB	19	5V
10	12V	20	5V



20-Pin Connector

CN20 Pin Definition

PIN	SINGAL
1	GND
2	GND
3	12V
4	12V



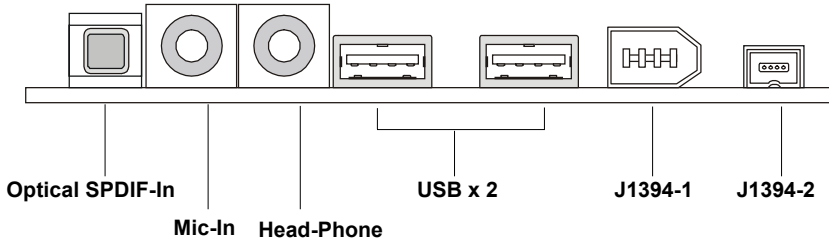
CN 20

Power Supply Specification

Dimension	70 (H)x1450(W)x105(D) mm
PFC	Yes (passive)
Wattage	200W Max
Electrical Design Specification	AC Output :100-127/200-240 VAC, Switch Selectable, Auto Protection DC Output :+3.3V 17A :+5V 12A :+12V 13.5A :-12V 0.5A :+5Vsb 3A :+12Vsb 2.5A 80 mm PWM Fan
Certificate	FCC/UL/CUL/BSMI/CB/NEMKO/TUV

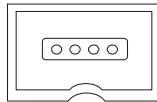
2.4 FRONT PANEL

The Front Panel is independent and extended from the mainboard. It's connected to the Front Panel Connector on the mainboard. You can find the following ports on the Front Panel.



IEEE 1394 Port: J1394-2

The mainboard provides two IEEE 1394 ports. This smaller one is designed for you to connect the IEEE 1394 device with external power. The IEEE 1394 high-speed serial bus complements USB by providing enhanced PC connectivity for a wide range of devices, including consumer electronics audio/video (A/V) appliances, storage peripherals, other PCs, and portable devices.



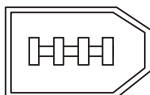
Software Support

IEEE 1394 Driver is provided by Windows® 98 SE, Windows® XP, Windows® ME and Windows® 2000. Just plug in the IEEE 1394 connector into the port. These Operating Systems will install the driver for IEEE 1394.

Chapter 2

IEEE 1394 Port: J1394-1

The bigger 6-pin IEEE 1394 Port on the back panel is designed for you to connect to IEEE 1394 devices without external power. That means the mainboard can provide the power for the devices connected to this port.

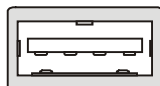
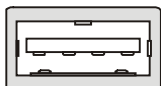


Software Support

IEEE 1394 Driver is provided by Windows® 98 SE, Windows® XP, Windows® ME and Windows® 2000. Just plug in the IEEE 1394 connector into the port. These Operating Systems will install the driver for IEEE 1394.

USB Ports

The mainboard provides an OHCI (Universal Host Controller Interface) Universal Serial Bus root for attaching USB devices such as keyboard, mouse or other USB-compatible devices. You can plug the USB device directly into the connector.

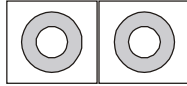


USB Port Description

PIN	SIGNAL	DESCRIPTION
1	VCC	+5V
2	-Data 0	Negative Data Channel 0
3	+Data 0	Positive Data Channel 0
4	GND	Ground
5	VCC	+5V
6	-Data 1	Negative Data Channel 1
7	+Data 1	Positive Data Channel 1
8	GND	Ground

Mic-in/Head-Phone

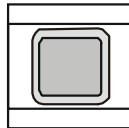
Mic-in is a connector for microphone. Head-Phone is a connector for Speakers or Headphones.



OPTICAL SPDIF-in

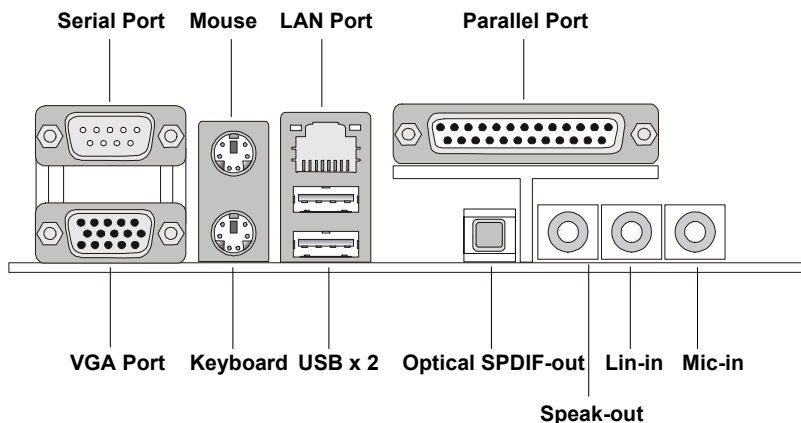
The OPTICAL connector allows you to receive the audio file of SPDIF interface for recording and playing.

The SPDIF (Sony & Philips Digital Interface) is developed jointly by the Sony and Philips corporations . A standard audio file transfer format, SPDIF allows the transfer of digital audio signals from one device to another without having to be converted first to an analog format.



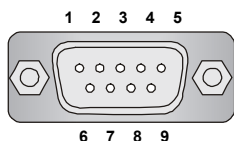
2.5 BACK PANEL

The Back Panel provides the following ports:



Serial Port

The mainboard offers a 9-pin male DIN serial port . The port is 16550A high speed communication ports that sends/receives 16 bytes FIFOs. You can attach a serial mouse or other serial devices directly to the connector.



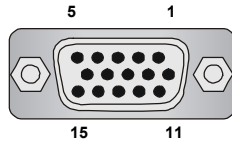
9-Pin Male DIN Connector

Pin Definition

PIN	SIGNAL	DESCRIPTION
1	DCD	Data Carry Detect
2	SIN	Serial In or Receive Data
3	SOUT	Serial Out or Transmit Data
4	DTR	Data Terminal Ready
5	GND	Ground
6	DSR	Data Set Ready
7	RTS	Request To Send
8	CTS	Clear To Send
9	RI	Ring Indicate

VGA Port

The mainboard provides one DB 15-pin female connector to connect a VGA monitor.



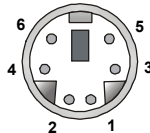
DB 15-Pin Female Connector

Pin Definition

Analog Video Display Connector (DB-15s)	
PIN	SIGNAL DESCRIPTION
1	Red
2	Green
3	Blue
4	Not used
5	Ground
6	Ground
7	Ground
8	Ground
9	Power
10	Ground
11	Not used
12	SDA
13	Horizontal Sync
14	Vertical Sync
15	SCL

Mouse/Keyboard Connectors

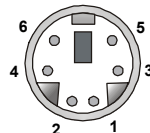
The mainboard provides two standard mini DIN connectors for attaching PS/2® mouse and keyboard. You can plug a PS/2® mouse or keyboard directly into the connector.



PS/2 Mouse (6-pin Female)

Pin Definition

PIN	SIGNAL	DESCRIPTION
1	Mouse DATA	Mouse DATA
2	NC	No connection
3	GND	Ground
4	VCC	+5V
5	Mouse Clock	Mouse clock
6	NC	No connection



PS/2 Keyboard (6-pin Female)

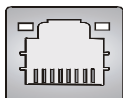
Pin Definition

PIN	SIGNAL	DESCRIPTION
1	Keyboard DATA	Keyboard DATA
2	NC	No connection
3	GND	Ground
4	VCC	+5V
5	Keyboard Clock	Keyboard clock
6	NC	No connection

Chapter 2

RJ45 LAN Jack

The mainboard provides one standard RJ-45 jack for connection to Local Area Network (LAN). You can connect a network cable to the LAN jack.

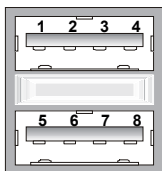


Pin Definition

PIN	SIGNAL	DESCRIPTION
1	TDP	Transmit Differential Pair
2	TDN	Transmit Differential Pair
3	RDP	Receive Differential Pair
4	NC	Not Used
5	NC	Not Used
6	RDN	Receive Differential Pair
7	NC	Not Used
8	NC	Not Used

USB Ports

The mainboard provides an OHCI (Universal Host Controller Interface) Universal Serial Bus root for attaching USB devices such as keyboard, mouse or other USB-compatible devices. You can plug the USB device directly into the connector.



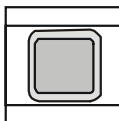
USB Ports

USB Port Description

PIN	SIGNAL	DESCRIPTION
1	VCC	+5V
2	-Data 0	Negative Data Channel 0
3	+Data 0	Positive Data Channel 0
4	GND	Ground
5	VCC	+5V
6	-Data 1	Negative Data Channel 1
7	+Data 1	Positive Data Channel 1
8	GND	Ground

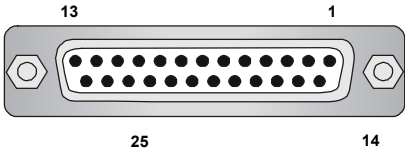
OPTICAL SPDIF-out

The OPTICAL connector allows you to play the audio file of SPDIF interface.
See p. 2-7 for more information.



Parallel Port

The mainboard provides a 25-pin female centronic connector as LPT. A parallel port is a standard printer port that supports Enhanced Parallel Port (EPP) and Extended Capabilities Parallel Port (ECP) mode.



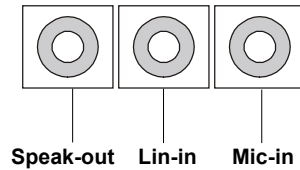
Pin Definition

PIN	SIGNAL	DESCRIPTION
1	STROBE	Strobe
2	DATA0 Data0	
3	DATA1	Data1
4	DATA2	Data2
5	DATA3	Data3
6	DATA4	Data4
7	DATA5	Data5
8	DATA6	Data6
9	DATA7	Data7
10	ACK#	Acknowledge
11	BUSY	Busy
12	PE	Paper End
13	SELECT	Select
14	AUTO FEED#	Automatic Feed
15	ERR#	Error
16	INIT#	Initialize Printer
17	SLIN#	Select In
18	GND	Ground
19	GND	Ground
20	GND	Ground
21	GND	Ground
22	GND	Ground
23	GND	Ground
24	GND	Ground
25	GND	Ground

Chapter 2

Audio Port

Speak-out is a connector for Speakers or Headphones. **Line In** is used for external CD player, Tape player, or other audio devices. **Mic-in** is a connector for microphones.



2.6 CONNECTORS

IDE Connectors: CN22 & CN23

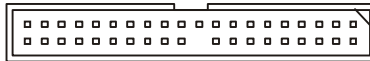
The mainboard has a 32-bit Enhanced PCI IDE and Ultra DMA 33/66/100 controller that provides PIO mode 0~4, Bus Master, and Ultra DMA/33/66/100 function. The two connectors on the mainboard allows you to connect to two IDE device.

CN22 (Primary IDE Connector)

- CN22 can only connect a HDD.

CN23 (Secondary IDE Connector)

- CN23 can only connect a CD-ROM drive.



If you install two hard disks on cable, you must configure the second drive to Slave mode by setting its jumper. Refer to the hard disk documentation supplied by hard disk vendors for jumper setting instructions.

FDD Connector: CN10

The mainboard provides you with a standard floppy disk drive connector that supports 1.44M floppy disk type.

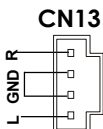


CD-in Connector: CN16

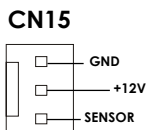
CN16

The diagram shows a connector with three pins. The left pin is labeled 'L', the middle pin is labeled 'GND', and the right pin is labeled 'R'. The connector is labeled 'CN16' at the top and 'JCD1' on the right side.

The mainboard provides the connector to connect the TV-Tuner card. The TV-Tuner card is included in the package. You can insert the TV-Tuner card into the PCI Slot 1.

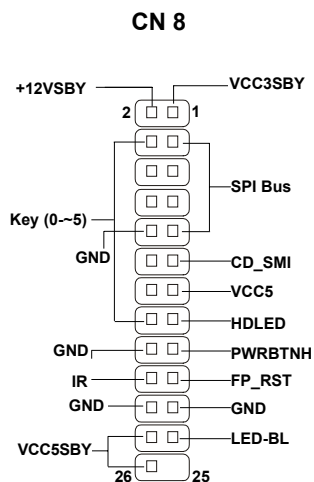


The CPU Fan connector supports system cooling fans with +12V that is controlled by PWM. When connecting the wire to the three-pin head connectors, always note that the red wire is the positive and should be connected to the +12V (that is controlled by PWM), the black wire is Ground and should be connected to GND.



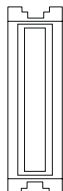
LCM Connector: CN8

The connector is used to connect the LCM on the front panel.



Modem Module Connector: CN21

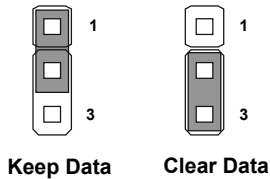
The mainboard provides the connector to connect the modem module. The modem module is directly inserted into the connector without an extra cable.



2.7 JUMPER

There is a CMOS RAM on board that has a power supply from external battery to keep the data of system configuration. With the CMOS RAM, the system can automatically boot OS every time it is turned on. That battery has long life time for at least 5 years. If you want to clear the system configuration, use the JBAT1 (Clear CMOS Jumper) to clear data. Follow the instructions below to clear the data:

Clear CMOS Jumper: J2



You can clear CMOS by shorting 2-3 pin while the system is off. Then return to 1-2 pin position. Avoid clearing the CMOS while the system is on; it will damage the mainboard.

2.8 SLOTS

The PCI slot allows you to insert PCI card or TV Tuner card. The TV Tuner card is included in the MEGA651.

PCI Slot 1

The AGP slot allows you to insert the AGP graphics card. AGP is an interface specification designed for the throughput demands of 3D graphics. It introduces a 66MHz, 32-bit channel for the graphics controller to directly access main memory and provides three levels of throughputs: 1x (266Mbps), 2x (533Mbps) and 4x (1.07Gbps).



AGP Slot

3

Using Audio Function

3.1 Control Panel

3.2 Remote Controller

3.3 AC Power on

3.4 Playing CD/MP3 in Hi-Fi Mode

3.5 Playing FM/AM in Hi-Fi Mode

3.6 Using Audio Function in PC Mode

Introduction

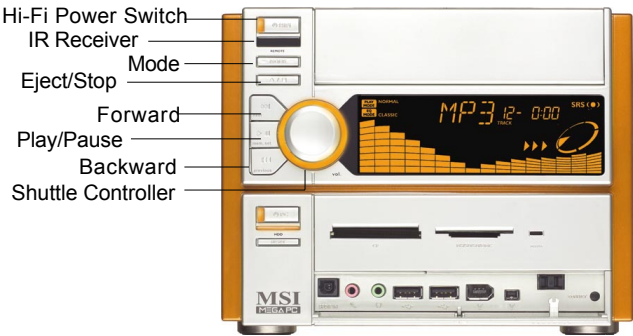
The MEGA 651 is featured with audio function. There are two ways to use audio function: **in PC mode, in Hi-Fi mode**. As the Mega 651 is shipped out in barebone, you must install the necessary components (such as HDD, CPU, RAM...) before using audio function in PC mode. However, there is no limit to use audio function in Hi-Fi mode, although the system is not set up completely.

You can use **control panel** or **remote controller** to select the audio function in Hi-Fi mode. However, *you can also use the control panel or remote control to select the audio function in PC mode*. See 3.1 and 3.2 for information on control panel and remote controller. On the other hand, the “**Mega Radio**” software has been included in package which allows you to listen to the radio in PC mode. See Appendix for information on “Mega Radio”.

In this chapter, we will tell you how to use audio function in Hi-Fi and PC mode. The LCM pictures are used to provide the information step by step.



3.1 CONTROL PANEL



HiFi	HiFi Power	Start the audio function.
MODE	Mode	Choose the audio mode (CD/MP3, FM, AM)
	Eject/Stop	Eject the CD/MP3 or stop the play. In Hi-Fi mode, you can press this button to recall memory sub-mode.
	Forward	Forward the channel search in FM/AM mode or forward the music selection in MP3 mode.
	Play/Pause	Play or pause the play in CD/MP3, AM, FM modes. In Hi-Fi mode, you can press this button to store the memory station.
	Backward	Backward the channel search in FM/AM mode or backward the music selection in CD/MP3 mode.
	Shuttle	a. Adjust volume b. Set EQ/Play mode c. Set SRS and timer

3.2 REMOTE CONTROLLER

The diagram shows a grey MSI Media PC remote control with the following labeled buttons:

- Function Keys for TV application:** A group of buttons at the top including a small circular button, a 'Full Screen' button, a 'TV' button, and a numeric keypad (1-9, 0, and a 'CH. RTN' button).
- SRS on/off Button:** A button labeled 'SRS' located below the numeric keypad.
- Control Buttons:** A central circular cluster of buttons including a play/pause button, stop, previous, and next buttons.
- Mute Button:** A button with a speaker icon and a slash, located to the left of the control buttons.
- Hi-Fi Power:** A green power button located to the right of the control buttons.
- Mode Button (CD/MP3/FM/AM):** A row of four buttons labeled 'CD', 'MP3', 'FM', and 'AM'.
- Adjusting Volume:** Two buttons labeled 'VOL.' with '+' and '-' symbols, located below the mode buttons.
- EQ Mode Button:** A button labeled 'EQ MODE' located below the volume buttons.
- Play Mode Button:** A button labeled 'PLAY MODE' located to the right of the EQ mode button.

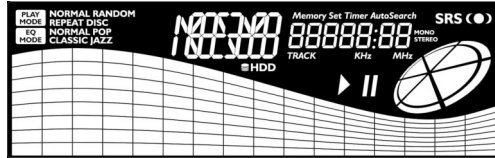
The MSI Media PC logo is visible at the bottom of the remote.

Control Buttons	These buttons allow you to eject/stop, forward, play/pause and backward the play in CD, MP3, AM or FM mode. See p. 3-3 for detail description.
Mute Button	Press this button to mute the volume.
Hi-Fi Power	Press this button to use the function of Hi-Fi audio.
Mode Button	There are three buttons:CD/MP3, FM and AM. Choose the mode you want.
Adjusting Volume	Use this button to adjust the volume.
EQ Mode	Use this button to set EQ sub-mode (Normal, POP, Classic, Jazz) in playing CD. See p. 3-9 for more information.
Play Mode	Use this button to set play sub-mode (Normal, Random, Repeat Disc) in playing CD. See p. 3-8 for more information.

3.3 AC POWER ON

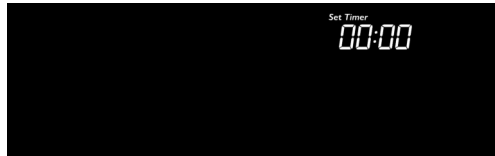
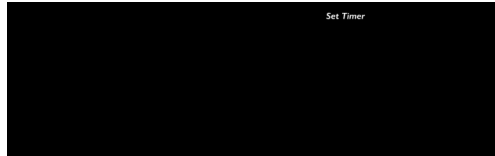
- Plug in the power cord

Plug in the power cord. You will see the panel (LCM) items FLASH 2 times.

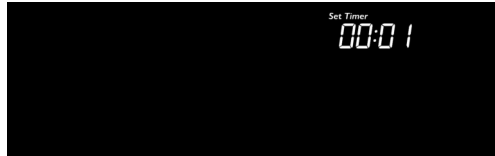


- Set Timer

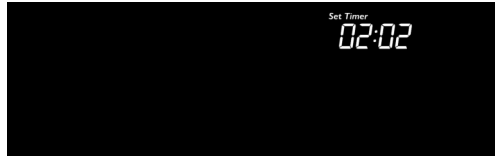
Then you can adjust time by shuttle. You will see timer 00:00 flash.



Turn the shuttle clockwise to adjust minute.

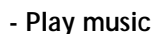
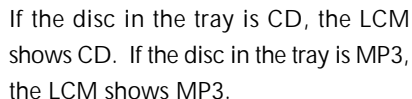
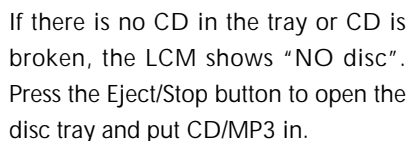



Turn the shuttle counterclockwise to adjust hour. After adjusting the minute and hour, press the shuttle to set the timer. The second will be reset to zero while setting the timer.

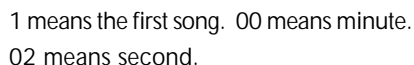


3.4 PLAYING CD/MP3 IN HI-FI MODE

Press HiFi button to start the audio function. Press MODE on the Control Panel to select CD/MP3 mode or press CD/MP3 on the remote controller to play CD/MP3.



Press the “Forward” button to play the music. The icon  will run a circle. The LCM shows .



Using Audio Function

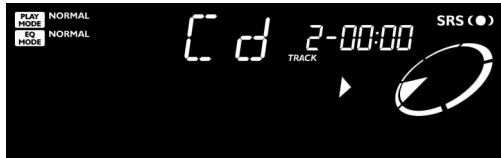
- Pause Music

Press "Play/Pause" button to pause the music. The LCM shows **II** .



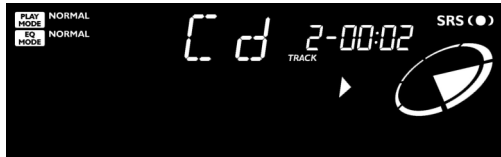
- Play Next Song

Press the "Forward" button to play the next song. There is no action if you hold "Forward" button.



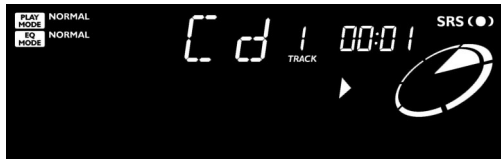
- Replay the song

Press "Backward" button once to re-play the song.



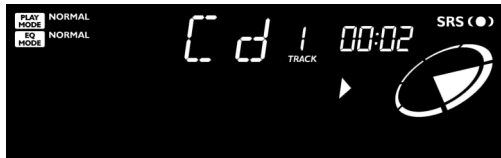
- Replay previous song

Press the "Backward" button twice (in 2 seconds) to play the previous song (After 2 seconds, it replay the song).



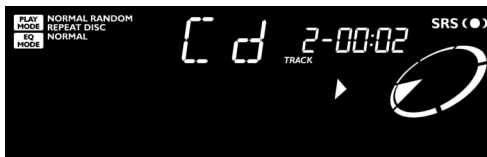
- Eject/Stop

Press the "Eject/Stop" button once to stop the music or open the CD-ROM. Press "Forward" button to play the song after rejecting.



- Adjusting volume

Press the shuttle once to set the Play Sub-Mode (NORMAL, RANDOM, REPEAT, and REPEAT DISC)



EQ MODE NORMAL: Allows you to play the CD in normal selection.

PLAY MODE **RANDOM**: Allows the system makes the random selection.

PLAY MODE REPEAT: Allows you to repeat the song.

: Allows you to repeat the whole disc.

NOTE: You can also press the “PLAY MODE” button on the remote controller to set the Sub-Mode.

Using Audio Function



- Set EQ Sub-Mode

Turn the shuttle to choose EQ Sub-Mode. The item you choose will flash and the others are on. Wait for 5 seconds to set the EQ Sub-Mode and go back to volume mode. You can also press the shuttle to set it and change to the Timer Sub-Mode at the same time.

Press the shuttle thrice (if you want to skip Play and EQ sub-modes) to set the Timer sub-mode. The operation of setting is the same as AC power on. After that, it changes to the Volume sub-mode. The LCM shows **Set Timer**.

EQ MODE NORMAL: To play the CD/MP3 in Normal mode.

EQ MODE CLASSIC : To play the CD/MP3 in Classic mode.

  : To play the CD/MP3 in Jazz mode.

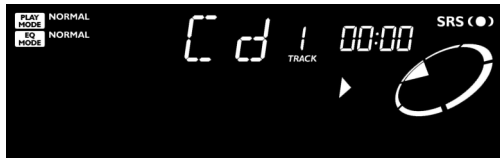
EQ MODE **POP** : To play the CD/MP3 in POP mode.

NOTE: You can also press the “EQ MODE” button on the remote controller to set it.



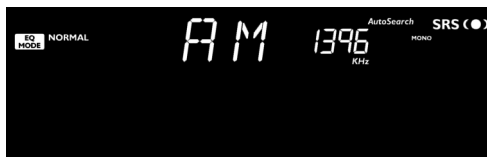
- Turn on SRS

Press the shuttle four times to turn on SRS. You can also press the MTS button on the remote controller to turn on SRS.

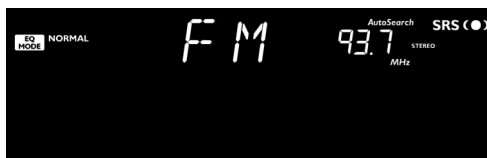


3.5 PLAYING FM/AM IN HI-FI MODE

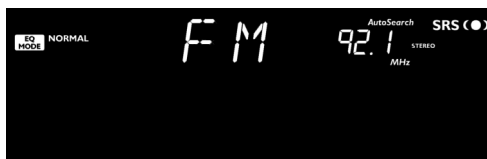
Press the "MODE" button on the Control Panel to set AM/FM mode or press AM/FM button on the Remote Controller to switch to AM or FM station.



Press the "Forward" button to jump to the next available station.



Press the "Backward" button to jump to the previous available station.



Press the “mem.set (Play/Pause)” button to store the memory station and turn the shuttle to choose the spot you want to save. Press the shuttle to set it (You can set up to 6 spots. You will see “ **Memory Set** ” on the LCM.)



Using Audio Function

- Adjusting Volume

Turn the shuttle to adjust the volume.



- Recall Memory Station

Press the "Eject/Stop" once to recall the memory sub-mode and turn the shuttle to choose the number of spot (1-6) to play.



- Set EQ Sub-Mode

Press the shuttle once into the "EQ" sub-mode. Turn the shuttle to choose the sub-mode. The operation is the same as in CD/MP3 mode.



- Set Timer

Press the shuttle twice to set the Timer sub-mode (operation is the same as in AC power on). After you set the hour and minute, it changes to the volume sub-mode. The LCM shows **Set Timer**.

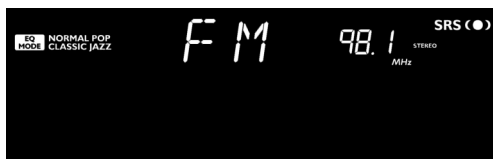


NOTE: Press the shuttle thrice or press the MTS button on the remote controller to turn the SRS on.

3.6 USING AUDIO FUNCTION IN PC MODE

You can use Remote Controller or Front Panel to control the audio function. Basically, **the operation is very similar to that in Hi-Fi mode. The difference is in memory station setting.**

1. Press "Hi-Fi" button to turn on/off radio.
2. Press "FM/AM" button to launch MSI Mega Radio to listen to radio.
3. Press "Mute" button to mute the volume.
4. Press "Vol up/down" button to adjust volume.
5. Press "Forward/Backward" button to get an available station.



- Get an available station.
- Press "mem.set".
- Use "Forward/Backward" button to choose the station number you want to store.
- Press "mem.set" again.

- Press "Memory".
- Use "Forward/Backward" button to choose the memory station.

- Use "Forward/Backward" button to choose the NEW station number.
- Press "mem.set" to reset the station.



Front Panel Function

1. Press "Hi-Fi" button to turn on/off radio.
2. Press "Mode" button to launch MSI Radio to listen to radio.
3. Turn "Shuttle" to adjust the volume.
4. Press "Forward/Backward" button to get an available station.



Memory Station

The shuttle is not allowed to set the memory station as in Hi-Fi mode. Use the "mem.set" button on the remote controller to set the memory station.

CD/MP3 Mode

To listen to the play of CD/MP3 in PC mode, you must use the application "Media Player" that is equipped in Windows. As in Radio Mode, there are two ways (Remote Controller/Front Panel) to use the CD/MP3 audio function.



Before playing MP3 in PC mode, you need to download the MP3 file into system, and then add the file to the playlist. The Mega 651 is not allowed to play music automatically after inserting MP3

Chapter 3

Remote Controller Function

1. Press "Hi-Fi" button to turn on/off CD/MP3.
2. Press "FM/AM/CDMP3" button to select the mode you want.
3. Press "Mute" button to mute the volume.
4. Press "Vol up/down" button to adjust volume.
5. Press "Forward/Backward" button to get the next/last song.
6. Press "Play/Pause" button to play/pause the song.
7. Press "Eject" button to eject/retrieve the tray.



Memory Station

The "Eject" button is not allowed to recall the memory station as in Hi-Fi mode. It can only be used to eject or retrieve the tray.

Front Panel Function

1. Press "Hi-Fi" button to turn on/off CD/MP3.
2. Press "FM/AM/CDMP3" button to select the mode you want.
3. Turn "Shuttle" to adjust the volume.
4. Press "Forward/Backward" button to get an available station.
6. Press "Play/Pause" button to play/pause the song.
7. Press "Eject" button to eject/retrieve the tray.



Memory Station

The "Eject" button is not allowed to recall the memory station as in Hi-Fi mode. It can only be used to eject or retrieve the tray.

4

Setting BIOS Function

- 4.1 Entering Setup**
- 4.2 The Main Menu**
- 4.3 Standard CMOS Features**
- 4.4 Advanced BIOS Features**
- 4.5 Advanced Chipset Features**
- 4.6 Integrated Peripherals**
- 4.7 Power Management Setup**
- 4.8 PnP/PCI Configurations**
- 4.9 PC Health Status**
- 4.10 Frequency/Voltage Control**

4.1 ENTERING SETUP

Press DEL to enter SETUP

Control Keys

<↑>	Move to the previous item
<↓>	Move to the next item
<←>	Move to the item in the left hand
<→>	Move to the item in the right hand
<Enter>	Select the item
<Esc>	Jumps to the Exit menu or returns to the main menu from a submenu
<+ /PU>	Increase the numeric value or make changes
<- /PD>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Load the default CMOS value from Fail-Safe default table, only for Option Page Setup Menu
<F7>	Load Optimized defaults
<F10>	Save all the CMOS changes and exit

Getting Help

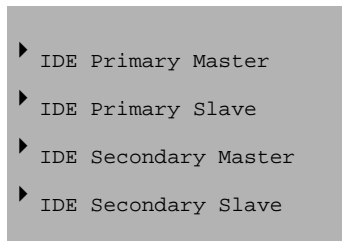
After entering the Setup menu, the first menu you will see is the Main Menu.

Main Menu

The main menu lists the setup functions you can make changes to. You can use the control keys (↑↓) to select the item. The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Sub-Menu

If you find a right pointer symbol (as shown in the right view) appears to the left of certain fields that means a sub-menu containing additional options can be launched from this field. You can use control keys (↑↓) to highlight the field and press <Enter> to call up the sub-menu. Then you can use the control keys to enter values and move from field to field within a sub-menu. If you want to return to the main menu, just press <Esc>.



General Help <F1>

The BIOS setup program provides a General Help screen. You can call up this screen from any menu by simply pressing <F1>. The Help screen lists the appropriate keys to use and the possible selections for the highlighted item. Press <Esc> to exit the Help screen.

4.2 THE MAIN MENU

```
Phoenix - AwardBIOS CMOS Setup Utility

▶ Standard CMOS Features
▶ Advanced BIOS Features
▶ Advanced Chipset Features
▶ Integrated Peripherals
▶ Power Management Setup
▶ PnP/PCI Configurations
▶ PC Health Status

▶ Frequency/Voltage Control
Load Fail-Safe Defaults
Load Optimized Defaults
Set Supervisor Password
Set User Password
Save & Exit Setup
Exit Without Saving

Esc : Quit      F9 : Menu in BIOS      ↑ | → : Select Item
F10 : Save & Exit Setup

Time, Date, Hard Disk Type...
```

Use this menu for basic system configurations, such as time, date etc.

Use this menu to setup the items of AWARD® special enhanced features.

Use this menu to change the values in the chipset registers and optimize your system's performance.

Use this menu to specify your settings for integrated peripherals.

Setting BIOS Function

Power Management Setup

Use this menu to specify your settings for power management.

PNP/PCI Configurations

This entry appears if your system supports PnP/PCI.

PC Health Status

This entry shows your PC health status.

Frequency/Voltage Control

Use this menu to specify your settings for frequency/voltage control.

Load Fail/Safe Defaults

Use this menu to load factory default settings into the BIOS for stable system performance operations.

Load Optimized Defaults

Use this menu to load the BIOS values for the best system performance, but the system stability may be affected.

Set Supervisor Password

Use this menu to set Supervisor Password.

Set User Password

Use this menu to set User Password.

Save & Exit Setup

Save changes to CMOS and exit setup.

Exit Without Saving

Abandon all changes and exit setup.

4.3 STANDARD CMOS FEATURES

```
Phoenix - AwardBIOS CMOS Setup Utility
Standard CMOS Features

Date (mm:dd:yy)      Mon, Jun 9 2003
Time (hh:mm:ss)      15 : 45 : 11

▶ IDE Primary Master
▶ IDE Primary Slave
▶ IDE Secondary Master
▶ IDE Secondary Slave

Drive A               [1.44M, 3.5 in.]

Video                 [EGA/VGA]
Halt On               [All , But Keyboard]

Base Memory            640K
Extended Memory        65472K
Total Memory           1024K

[1]--:Move Enter:Select +/-/PU/PD:Value F10:Save
F5: Previous Values  F6: Fail-Safe Defaults  ESC:Exit F1:General Help
F7: Optimized Defaults
```

This allows you to set the system to the date that you want (usually the current date). The format is <day><month> <date> <year>.

This allows you to set the system time that you want (usually the current time). The time format is <hour> <minute> <second>.

Press PgUp/<+> or PgDn/<-> to select *Manual*, *None* or *Auto* type. Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category. If your hard disk drive type is not matched or listed, you can use *Manual* to define your own drive type manually.

Setting BIOS Function

If you select *Manual*, related information is asked to be entered to the following items. Enter the information directly from the keyboard. This information should be provided in the documentation from your hard disk vendor or the system manufacturer.

Access Mode	The settings are CHS, LBA, Large, Auto.
Capacity	The formatted size of the storage device.
Cylinder	Number of cylinders.
Head	Number of heads.
Precomp	Write precompensation.
Landing Zone	Cylinder location of the landing zone.
Sector	Number of sectors.

Drive A

This item allows you to set the type of floppy drives installed.

Video

The setting controls the type of video adapter used for the primary monitor of the system. Available options are *EGA/VGA*.

Halt On

The setting determines whether the system will stop if an error is detected at boot. Available options are:

<i>All Errors</i>	The system stops when any error is detected.
<i>No Errors</i>	The system doesn't stop for any detected error.
<i>All, But Keyboard</i>	The system doesn't stop for a keyboard error.
<i>All, But Diskette</i>	The system doesn't stop for a disk error.
<i>All, But Disk/Key</i>	The system doesn't stop for either a disk or a key

4.4 ADVANCED BIOS FEATURES



Boot Sequence

NOTE: If you want to boot from USB device like USB FDD, please turn on either USB keyboard or mouse enable.

Cache memory is additional memory that is much faster than conventional DRAM (system memory). When the CPU requests data, the system transfers the requested data from the main DRAM into cache memory, for even faster access by the CPU. This setting enables/disables the internal cache (also known as L1 or level 1 cache) and external cache (also known as L2 or level 2 cache). Settings are: *Enabled* and *Disabled*.

Setting BIOS Function

CPU L2 Cache ECC Checking

This setting allows you to enable or disable the ECC (Error-Correcting Code) feature for error detection and correction when data passes through L2 cache memory. Setting options: *Disabled*, *Enabled*.

Seek Floppy

Setting to *Enabled* will make BIOS seek floppy drive A: before booting the system.
Settings: *Disabled, Enabled*.

Boot Up Num-Lock Status

This setting is to set the Num Lock status when the system is powered on. Setting to *On* will turn on the Num Lock key when the system is powered on. Setting to *Off* will allow users to use the arrow keys on the numeric keypad. Setting options: *On*, *Off*.

Typematic Rate Setting

This item is used to enable or disable the typematic rate setting including Typematic Rate & Typematic Delay.

Typematic Rate (Chars/Sec)

After *Typematic Rate Setting* is enabled, this item allows you to set the rate (characters/second) at which the keys are accelerated. Settings: 6, 8, 10, 12, 15, 20, 24 and 30.

Typematic Delay (Msec)

This item allows you to select the delay between when the key was first pressed and when the acceleration begins. Settings: *250, 500, 750* and *1000*.

Chapter 4

Security Option

This specifies the type of BIOS password protection that is implemented. Settings are described below:

Option	Description
<i>Setup</i>	The password prompt appears only when end users try to run Setup.
<i>System</i>	A password prompt appears every time when the computer is powered on or when end users try to run Setup.

HDD S.M.A.R.T Capability

This allows you to activate the S.M.A.R.T. (Self-Monitoring Analysis & Reporting Technology) capability for the hard disks. S.M.A.R.T is a utility that monitors your disk status to predict hard disk failure. This gives you an opportunity to move data from a hard disk that is going to fail to a safe place before the hard disk becomes offline. Settings: *Enabled* and *Disabled*.

HT CPU Function

The Intel processor uses Hyper-Threading technology to increase transaction rates and reduces end-user response times. The technology treats the two cores inside the processor as two logical processors that can execute instructions simultaneously. In this way, the system performance is highly improved. If you disable the function, the processor will use only one core to execute the instructions. Settings: *Enabled* and *Disabled*.

APIC Mode

This field is used to enable or disable the APIC (Advanced Programmable Interrupt Controller). Due to compliance with PC2001 design guide, the system is able to run in APIC mode. Enabling APIC mode will expand available IRQ resources for the system. Settings: *Enabled* and *Disabled*.

Chapter 4

MA 1T/2T Select

This setting controls the SDRAM command rate. Setting to Auto allows the SDRAM command rate to be determined by the BIOS. Selecting MA 1T/MA 2T makes SDRAM signal controller run at 1T/2T rate. 1T is faster than 2T. Setting options: Auto, MA 2T, MA 1T.

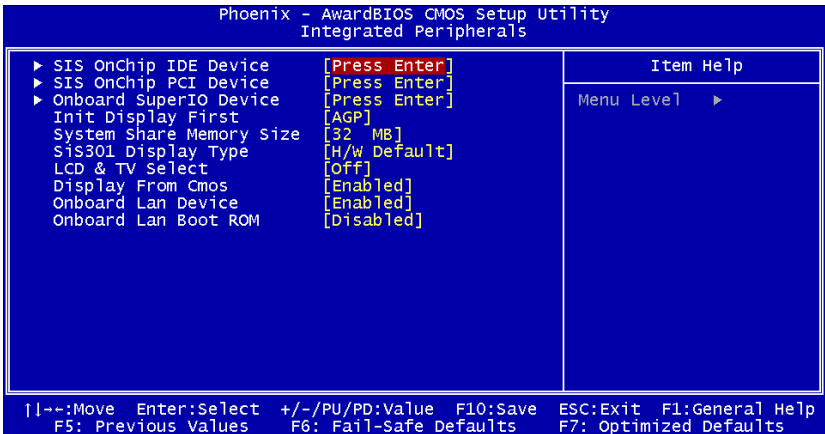
AGP Aperture Size

This setting controls just how much system RAM can be allocated to AGP for video purposes. The aperture is a portion of the PCI memory address range dedicated to graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation. The option allows the selection of an aperture size of *4MB, 8MB, 16MB, 32MB, 64MB, 128MB, and 256 MB*.

AGP Fast Write

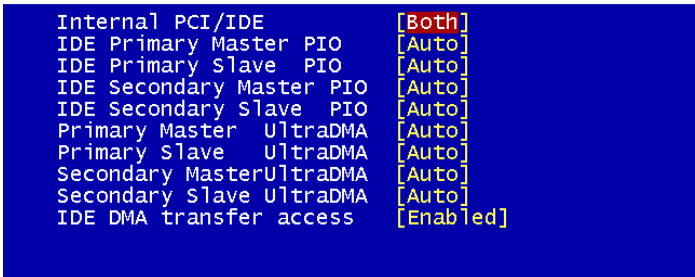
The item enables or disables the AGP Fast Write feature. The Fast Write technology allows CPU to write directly into the graphics controller without passing anything through system memory and improves 8x speed accordingly. Select Enabled only when your AGP card supports the feature. Options: *Disabled*, *Enabled*.

4.6 INTEGRATED PERIPHERALS



SIS OnChip IDE Device

Press <Enter> to enter the sub-menu and the following screen appears:



Internal PCI/IDE

This setting enables or disables the internal primary and secondary PCI & IDE controllers. Setting options: *Disabled, Primary, Secondary, Both*.

USB 2.0 Supports

Set to *Enabled* if you need to use any USB 2.0 device in the operating system that does not support or have any USB 2.0 driver installed, such as DOS and SCO Unix. Setting options: *Disabled, Enabled*.

USB Keyboard Support

Select *Enabled* if you need to use a keyboard in the operating system. Setting options: *Enabled, Disabled*.

USB Mouse Support

Select *Enabled* if you need to use a mouse in the operating system. Setting options: *Enabled, Disabled*.

SIS AC97 AUDIO

Auto allows the motherboard's BIOS to detect whether you're using any audio device. If so, the onboard audio controller will be enabled. If not, the onboard audio controller will be disabled. If you want to use different controller cards to connect audio connectors, set the field to *Disabled*. Setting options: *Disabled*, *Auto*.

SIS S/W Modem

Auto allows the mainboard to detect whether a modem is used. If a modem is detected, the onboard S/W modem controller will be enabled; if not, it is disabled. Disable the controller if you want to use other controller cards to connect a modem. Settings: *Auto*, *Disabled*.

SIS 1394 Controller

This item allows you to enable/disable the onboard IEEE1394 controller. Setting options: *Enabled* and *Disabled*.

Chapter 4

Onboard Super IO Device

Press <Enter> to enter the sub-menu and the following screen appears:

```
Onboard FDC Controller      [Enabled]
Onboard Serial Port 1      [Auto]
Onboard Parallel Port      [378/IRQ7]
Parallel Port Mode         [ECP]
EPP Mode Select            [EPP1.7]
ECP Mode Use DMA           [3]
```

Onboard FDC Controller

Select Enabled if your system has a floppy disk controller (FDD) installed on the system board and you wish to use it. If you install add-on FDC or the system has no floppy drive, select Disabled in this field. The settings are: *Enabled* and *Disabled*.

Onboard Serial Port 1

Select an address and corresponding interrupt for the first and second serial ports. The settings are: *3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled, Auto.*

Onboard Parallel Port Mode

SPP : Standard Parallel Port

EPP : Enhanced Parallel Port

ECP : Extended Capability Port

ECP + EPP: Extended Capability Port + Enhanced Parallel Port

To operate the onboard parallel port as Standard Parallel Port only, choose "SPP."
To operate the onboard parallel port in the EPP mode simultaneously, choose "EPP." By choosing "ECP", the onboard parallel port will operate in ECP mode only. Choosing "ECP + EPP" will allow the onboard parallel port to support both the ECP and EPP modes simultaneously.

Setting BIOS Function

EPP Mode Select

The onboard parallel port is EPP Spec. compliant, so after the user chooses the onboard parallel port with the EPP function, the following message will be displayed on the screen: "EPP Mode Select." At this time either *EPP 1.7 spec* or *EPP 1.9 spec* can be chosen.

ECP Mode Use DMA

The ECP mode has to use the DMA channel, so choose the onboard parallel port with the ECP feature. After selecting it, the following message will appear: "ECP Mode Use DMA." At this time, the user can choose between DMA channel 3 or 1.

Init Display First

This item specifies which VGA card is your primary graphics adapter. Settings: *PCI Slot* and *AGP*.

System Share Memory Size

For SiS650 chipset, the system shares memory to the onboard VGA card. This setting controls the exact memory size shared to the VGA card. Setting options: *4MB, 8MB, 16MB, 32MB, 64MB, 24MB.*

SiS301 Display Type

This item allows you to set the TV display type. Setting options: *CRT1+S-V PAL OTV*, *CRT1+S-V PAL UTV*, *CRT1+S-V NTSC OTV*, *CRT1+S-V NTSC UTV*.

LCD&TV Select

This item allows you to select LCD or TV for display type. Setting options: *off*, *LCD*, *TV*, *LCD+TV*.

Display From CMOS

This item allows you to enable or disable the function of display from CMOS in Window 2000. Setting options: *Disabled, Enabled*.

Chapter 4

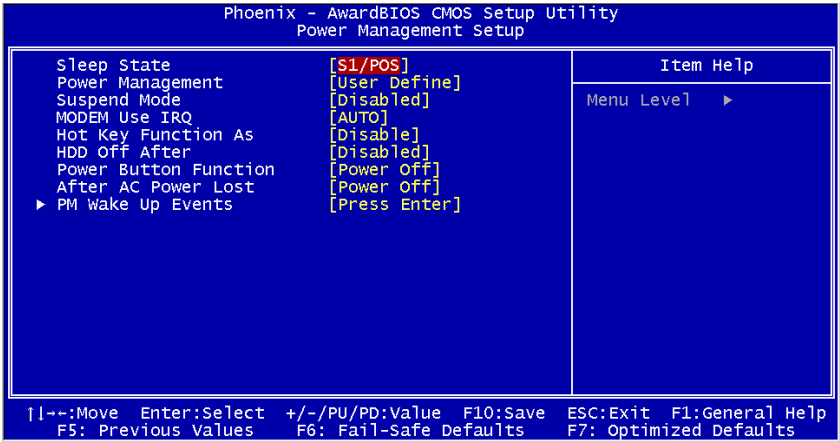
Onboard LAN Device

This item is used to enable or disable the onboard LAN controllers. Setting options: *Enabled, Disabled.*

Onboard Lan Boot ROM

The items enable or disable the initialization of the onboard LAN Boot ROMs during bootup. Selecting *Disabled* will speed up the boot process.

4.7 POWER MANAGEMENT SETUP



Sleep State

This item specifies the power saving modes for ACPI function. If your operating system supports ACPI, such as Windows 98SE, Windows ME and Windows 2000, you can choose to enter the Standby mode in S1(POS) or S3(STR) fashion through the setting of this field. Options are:

- S1/POS* The S1 sleep mode is a low power state. In this state, no system context is lost (CPU or chipset) and hardware maintains all system context.
- S3/STR* The S3 sleep mode is a lower power state where the information of system configuration and open applications/files is saved to main memory that remains powered while most other hardware components turn off to save energy. The information stored in memory will be used to restore the system when a “wake up” event occurs.

After AC Power Lost

This setting specifies whether your system will reboot after a power failure or interrupt occurs. Available settings are:

- | | |
|-------------------|---|
| <i>Off</i> | Leaves the computer in the power off state. |
| <i>On</i> | Leaves the computer in the power on state. |
| <i>Last State</i> | Restores the system to the status before power failure or interrupt occurred. |

PM Wake Up Events

Press <Enter> and the following sub-menu appears.

```

IRQ [3-7,9-15],NMI           [Enabled]
IRQ 8 Break Suspend           [Disabled]
Wake Up On Ring                [Disabled]
Wake Up On PME                 [Enabled]
USB Wake up from S3            [Disabled]
PS2KB Wakeup from S3/S4/S5     [Hot Key]
PS2MS Wakeup from S3/S4/S5     [Disabled]
Resume by Alarm                 [Disabled]
X Month Alarm                   NA
X Day of Month Alarm            0
X Time (hh:mm:ss) Alarm        0 : 0 : 0

** Reload Global Timer Events **
Primary IDE                     [Disabled]
Secondary IDE                   [Disabled]
FDD,COM,LPT Port               [Disabled]
PCI PIRQ[A-D]#                 [Disabled]

```

IRQ [3-7, 9-15], NMI & IRQ 8 Break Suspend

This setting enables/disables the monitoring of the specified IRQ line. If set to *Enabled*, the activity of the specified IRQ line will prevent the system from entering power saving modes or awaken it from power saving modes. Setting options: *Disabled*, *Enabled*.

Wake Up On PME/Ring

These two fields specify whether the system will be awakened from power savings modes when activity or input signal of the specified hardware peripheral or components is detected. Setting options: *Disabled*, *Enabled*.

Chapter 4

USB Wake Up from S3

This item allows the activity of the USB device to wake up the system from S3 (Suspend to RAM) sleep state. Settings are: *Enabled* and *Disabled*.

PS2KB Wake Up from S3/S4/S5

This setting allows you to enter "Any Key" (max. 8 numbers) to wake up the system from S3/S4/S5 state. Settings are: *Hot Key*, *Disabled*, *Password*.

PS2MS Wake Up from S3/S4/S5

This setting allows the activity of the mouse to wake up the system from S3/S4/S5 state. Settings are: *Disabled*, *Click*, *Move & Click*.

Resume By Alarm

This function is for setting date and time for your computer to boot up. During *Disabled*, you cannot use this function. During *Enabled*, choose the Month, Day, and Time Alarm:

Month Alarm You can choose which month the system will boot up.

Day of Month Alarm You can choose which day of the preset month the system will boot up. Set to 0, to boot every day.

Time (hh:mm:ss) Alarm You can choose what hour, minute and second the system will boot up.

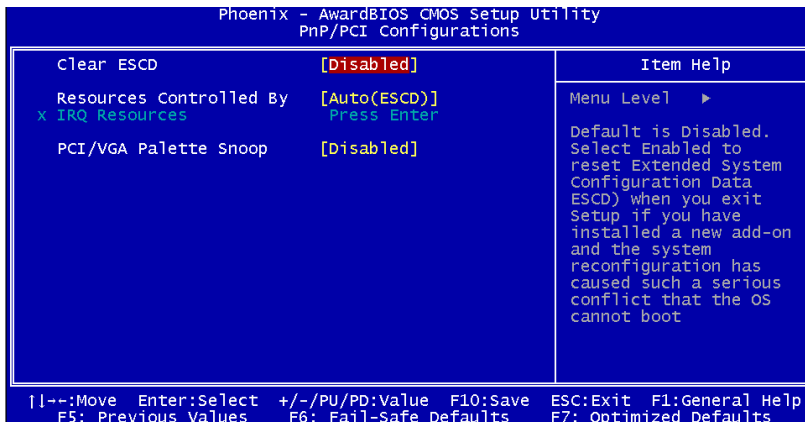
Reload Global Timer Events

Primary/Secondary IDE 0/1, FDD, COM, LPT Port, PCI PIRQ [A-D]

The global timer is the hardware timer that counts down to the power saving modes. If the monitoring of the listed hardware peripherals or components is enabled, the activity of the specified peripherals or components will awaken the system or reload the original count of global timer when they are accessed.

4.8 PNP/PCI CONFIGURATIONS

This section describes configuring the PCI bus system and PnP (Plug & Play) feature. PCI, or **P**eripheral **C**omponent **I**nterconnect, is a system which allows I/O devices to operate at speeds nearing the speed the CPU itself uses when communicating with its special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.



Clear ESCD

Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system can not boot. The settings are: *Enabled* and *Disabled*.

Resources Controlled By

The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows® 95/98. If you set this field to “manual” choose specific resources by going into each of the sub menu that follows this field (a sub menu is preceded by

Chapter 4

a "➤"). The settings are: *Auto (ESCD)*, *Manual*.

IRQ Resources

The items are adjustable only when *Resources Controlled By* is set to *Manual*. Press <Enter> and you will enter the sub-menu of the items. IRQ Resources list IRQ 3/4/5/7/9/10/11/12/14/15 for users to set each IRQ a type depending on the type of device using the IRQ. Settings are:

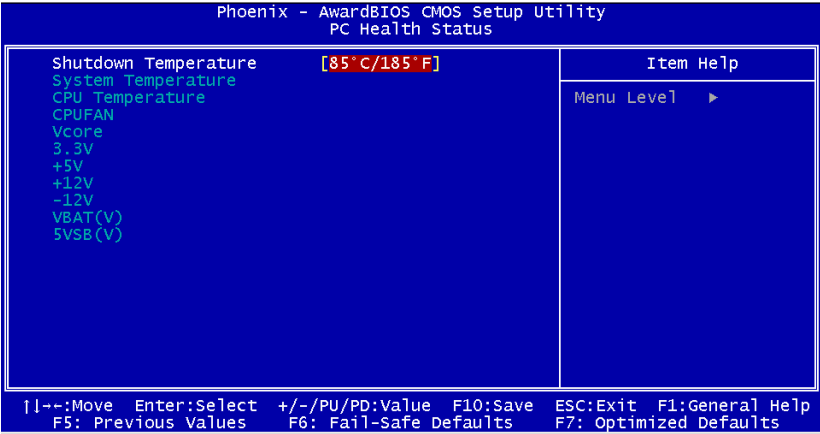
PCI Device For Plug & Play compatible devices designed for PCI bus architecture.

Reserved The IRQ will be reserved for further request.

PCI/VGA Palette Snoop

When set to *Enabled*, multiple VGA devices operating on different buses can handle data from the CPU on each set of palette registers on every video device. Bit 5 of the command register in the PCI device configuration space is the VGA Palette Snoop bit (0 is disabled).

4.9 PC HEALTH STATUS



Shutdown Temperature

When the processor reaches the preset temperature, the ACPI-aware system will be shut down. Settings: *Disabled, 85°C/185°F, 90°C/194°F.*

System/CPU Temperature, CPU Fan, Vcore, 3.3V, +5V, +12V, -12V, VBAT (V), 5VSB(V)

These items display the current status of all of the monitored hardware devices/ components such as CPU voltages, temperatures and all fans' speeds.

4.10 FREQUENCY/VOLTAGE CONTROL



Auto Detect DIMM/PCI Clk

Spread Spectrum

When the motherboard's clock generator pulses, the extreme values (spikes) of the pulses creates EMI (Electromagnetic Interference). The Spread Spectrum function reduces the EMI generated by modulating the pulses so that the spikes of the pulses are reduced to flatter curves. If you do not have any EMI problem, leave the setting at *Disabled* for optimal system stability and performance. But if you are plagued by EMI, activate the Spread Spectrum for EMI reduction. Remember to disable Spread Spectrum if you are overclocking because even a slight jitter can introduce a temporary boost in clockspeed which may just cause your overclocked processor to lock up. Options: *Disabled, Enabled*.

Setting BIOS Function

CPU Frequency

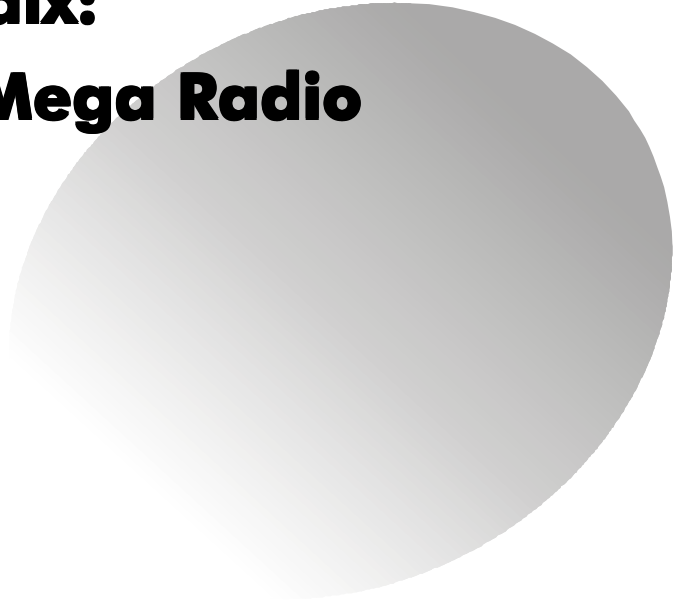
Use this item to select the appropriate frequency for your CPU FSB. Options:
Default, 100MHz, 133MHz.

DRAM Frequency

This setting shows the current frequency of DDR DRAM (read only). Options: *By SPD, 200MHz, 266MHz, 333MHz.*

Appendix:

Using Mega Radio



The Mega Radio Application is developed by MSI which is used for Mega 651 only. The application allows you to listen to radio, set memory station and record music in Windows XP. Please pay attention to the fact as below:

If the AC power is off while you are using Mega Radio application, the system will lose the data saved before when the power is turned on again.

See the following for the three functions:

Listening to Radio

When you launch the Mega Radio application, you will see the control panel as below.



There are some functions on the control panel.

a. Choosing previous/next station

Clicking on the PREVIOUS/NEXT buttons allows you to choose the previous or next radio station.

b. Choosing FM/AM station

Clicking on the FM/AM buttons allows you to choose FM/AM station.

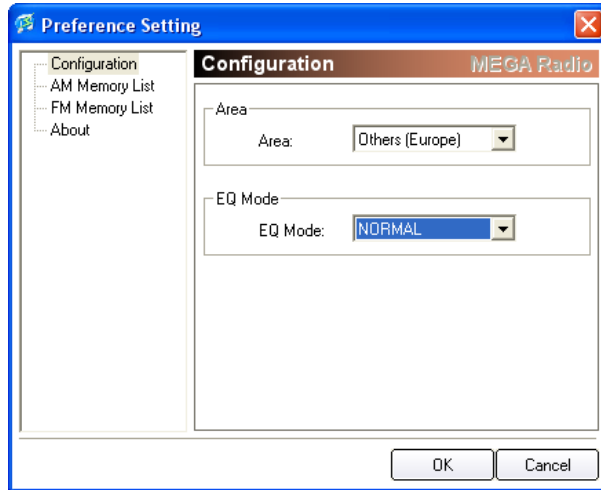
c. Adjusting volume

Click on the small circle on the VOL button and turn the circle clockwise to adjust the volume.



Clicking on the SET button allows you to set preference. There are four kinds of preference you can set

<Setting Configuration>

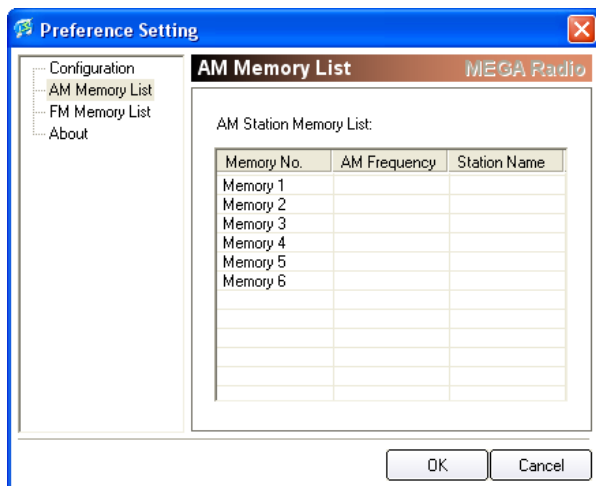


In "Configuration" window, you can set "Area" and "EQ Mode". There are six options in "Area": Asia, Middle East, Near East, Russia, South Africa and Others (Europe). Choose the area you live in.

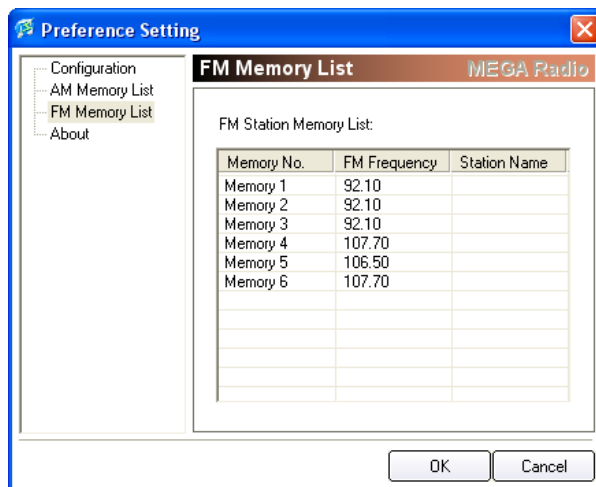
NOTE: Each area has its proprietary frequency range. If you are not unable to receive some stations in your area, there might be improper setting in this option.

In “EQ Mode”, you have four options: Normal, POP, Classic, Jazz. Choose the mode you prefer.

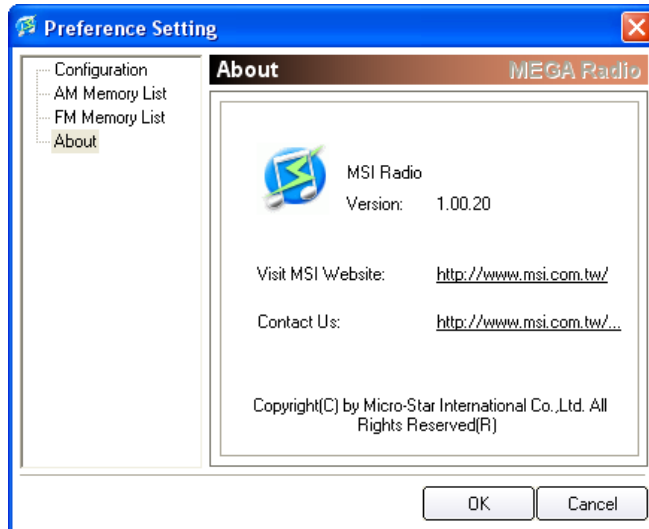
<Setting AM/FM Memory List>



In “AM Memory List” or “FM Memory List” window, you can set 6 AM or FM memory stations. Just type the AM or FM frequency and station name to set the memory station.



<About Mega Radio>



The window shows the Mega Radio version you are using. Click the web address to contact us if you need more information about our products.

Setting Memory Station

Click on the PREVIOUS or NEXT button to choose the station you want to memorize. After selecting the station, click on the memory station number you want to memorize. There are 6 station numbers you can use. The number you choose will become “yellow” while others are in “white” color.



If you want to reset the memory station, click on the station number you want to reset. Then, click on the left top of the mouse, a window as below will pop up:



Click on “Yes” to erase the memory station. Then follow the steps mentioned to reset the memory station.

Recording Music

Click on the button to use the recording function.



Click on the button to use the recording function.

You will see the recording window pops up. There are five buttons on the recording window.



Click on this button to close the recording window.



Click on this button to suspend the music from playing.




Click on this button to play the recorded music.



Click on this button to stop the music playing.



Click on this button to record the music.

After recording, click on the  button again. You will see the “Save As” window pops up. Type the file name you want to save, and then click on “Save” to save the music.

